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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of  
Noboyuki, Kanno

App. No.: 10/009554  
Filed: October 26, 2001  
Conf. No.: 3695  
Title: DRIVE UNIT OF ELECTRIC  
MOTOR-OPERATED VEHICLE  
Examiner: H. Phan  
Art Unit: 3618  
Commissioner for Patents  
P.O. Box 1450  
Arlington, VA 22313-1450

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the United States Patent Office via fax to  
(703) 872-9327 on:

March 21, 2004

  
Ernest A. Beutler  
Reg. No. 19901REQUEST FOR RECONSIDERATION

Dear Sir:

In response to the Final Office Action, dated November 3, 2004 and the Advisory Action dated February 18, 2004, applicant withdrew the Proposed Amendment, filed January 27, 2004 and requests entry of the an amendment on March 21, 2004 to place the application in obvious condition for allowance or in better form for appeal filed concurrently herewith.

The Examiner has refused to enter that amendment, which applicant understands that the Examiner believes that it does not place the case in condition for allowance. However it substantially reduces the issues on appeal because it in effect withdraws previous claim 1 and amends that claim to constitute claim 3 in independent form and thus also cancels that claim. Therefore entry is solicited in support of the Brief filed concurrently herewith

Respectfully submitted,  
By:



Ernest A. Beutler  
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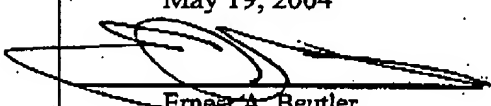
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May 19, 2004

  
Ernest A. Beutler  
Reg. No. 19901

Dear Sir:

**APPELLANT'S BRIEF****RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences the decisions of which would have a bearing on or be affected by the decision in this appeal.

**REAL PARTY IN INTEREST**

In addition to the appellant, the real party in interest includes his assignee, Kabushiki Kaisha Moric, a Japanese company.

**STATUS OF CLAIMS**

As will be discussed below in connection with the status of amendments, a first Proposed Amendment after Final was filed on January 27, 2004 and was denied entry because it was deemed by the Examiner to raise "New Issues" in an Advisory Action, dated February 18, 2004. Therefore that amendment was withdrawn and a Substitute Amendment was filed on March 21, 2004. That substitute amendment in effect withdrew

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previous claim 1, which was rejected on prior art, and amended that claim to incorporate the subject matter of rejected claim 3, without any further amendment. Therefore the amendment raised no new issue, as admitted by the Examiner in the following Advisory Action, dated April 13, 2004, but did simplify the issues on appeal by withdrawing a previously rejected claim. Thus it should have been entered and the Examiner is being requested to reconsider his position in a concurrent filing. Thus it is believed that the case before the Board has 7 claims (1, 2, 4, 5, and 7-10) clean copies of which are contained in the attached Appendix.

### **STATUS OF AMENDMENTS**

As noted above, a first Proposed Amendment after Final was filed on January 27, 2004 and was denied entry because it was deemed by the Examiner to raise "New Issues" in an Advisory Action, dated February 18, 2004. Therefore that amendment was withdrawn and a Substitute Amendment was filed on March 21, 2004. That substitute amendment in effect withdrew previous claim 1, which was rejected on prior art, and amended that claim to incorporate the subject matter of rejected claim 3, without any further amendment. Thus entry of that amendment is reflected in the Appendix.

### **APPELLANT'S INVENTION**

Appellant's invention relates generally to the type of wheel chair that employs an assistant that pushes the wheel chair and its occupant and more particularly to a control, carried by the frame of the wheel chair and which in a very simple and direct manner permits the assistant to selectively enable or disable the operation of the separate electric motors that are coupled to the respective wheels through a speed reducing transmission and which are simultaneously powered to permit straight ahead running assist for the assistant. This is done by providing a single control on the wheel chair frame that simultaneously engages or disengages the free wheeling transmissions in the connection between each motor and the respective wheel.

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The disclosed structure for achieving this simultaneous coupling or uncoupling the transmissions is described in full detail by reference to the figures of the drawings specifically beginning at the first full paragraph on page 23 and ending at the first full paragraph on page 25. The remainder of the structure is described in detail under the heading at the bottom of page 4.

### **ISSUES BEFORE THE BOARD**

The issue before the Board is whether the subject matter of the rejected claims is obvious under 35 USC 103(a) from the combination of U.S. Patent 5,246,082 (Alber) in view of U.S. Patent 5,545,567 (Telford et al)

### **GROUPING OF THE CLAIMS**

Claims 1, 4 and 5 stand or fall together as do claims 7 and 9. The patentability of these groups and the remaining claims is argued separately.

### **APPELLANT'S ARGUMENTS**

Basically it is the Examiner's Position that the Alber patent shows all of the claimed features except for the type of transmission employed and that it would be obvious to one skilled in the art to substitute Telford et al's transmission for that of Alber's transmission. Neither position is believed to be obvious to one skilled in the art to which the invention relates.

Considering first the obviousness of the combination, it is submitted that one skilled in the power assisted wheel chair art to which Alber relates would look to an electric motor operated winch art for a solution to the problem of providing simultaneous operation of the two independently operated electric motors for a pair of vehicle wheels.

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As is noted in Telford et al's Abstract, it is concerned with the locking of the winch drum against rotation when a cable is being wound in to lift a load and the motor has insufficient strength to do so or is stopped. When the load is being lowered, the motor acts as a brake to prevent rapid descent. Thus if substituted into Alber's construction it would not be possible to manually push the wheel chair forward, equivalent to lifting the load. In addition the motor would act as a brake to prevent the assistant's desire to pull the wheel chair in reverse, the equivalent of lowering the load. It is well established that references can not be combined where the combination results in a structure opposite to that desired by the primary reference.

In addition to this basic defect in the Examiner's attempt to make out a prima facie case of obviousness, the basic reference does not teach the simultaneous operation of both transmissions as is required by even the broadest and sole independent claim. This claim recites "each of said transmissions comprising a coupling element for selectively retaining the associated ring gear element against rotation or permitting rotation thereof for selectively driving the associated wheel from said output shaft of the respective of said motors at a speed reduction ratio or permitting freewheeling of said wheel relative to said output shaft and an operation mechanism mounted on the vehicle frame, and a transmitting system for transmitting the action of the operation mechanism simultancously to both coupling elements of said planetary gear mechanisms ". As previously noted, Telford never permits free wheeling but acts as a brake or a clutch and thus would not be used in a wheel chair.

More importantly, however, Alber has no common operator for controlling the transmission, as is specifically claimed. Alder has a common operator for energizing the two electric motors, but not their respective transmission coupling elements as specifically claimed. Each transmission must be actuated separately, not by an assistant pushing the chair but by the occupant of the chair. Thus two people are required for assist operation.

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In addition claim 1 also requires the planetary transmission to have "another of said planetary gear mechanism elements being in continuous driving relation with the respective one of said wheels". As should be obvious from the foregoing discussion no element of Alber's planetary transmission is in constant engagement with the driven wheel, the transmission is only coupled to the wheel by the occupant controlled coupling.

Claim 2 even more specifically defines over the combination in calling for "the wheel is driven by a transmission output shaft connected to the carrier plate element coaxially with the axis of said plate element, a wheel gear fixed to an inside cylindrical surface of said wheel driven by an output gear formed on the transmission output shaft, the motor output shaft and the transmission output shaft are disposed coaxially". The Examiner claims that this is shown in Alber's FIG. 2, but it is not and he has not specified what elements in the reference correspond to the claimed elements.

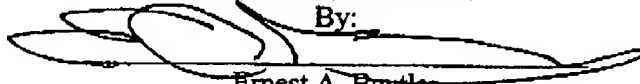
Claims 7-9 also further distinguish in calling for both the ring gear element and the wheel that is driven to be "journalled on a stationary part of the vehicle in which the respective ring gear is also journalled". The Examiner has broadly asserted that this structure, which is shown in appellant's FIG. 22, is anticipated by Alber but it clearly is not as the electric motor, transmission and driven wheel are combined in a unit that is mounted as a whole on the frame, and this is in fact his claimed invention.

Claim 8 depends on claim 7 and further distinguishes in calling for the flexible transmitter connection to the locking pins, none of such elements being disclosed or even remotely suggested by Alber alone let alone the combination the Examiner has proposed.

Therefore the Board is most respectfully requested to reverse all of the Examiner's rejections for failing to make out a prima facie case of obviousness.

Respectfully submitted,

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attachment: Credit Card Authorization for Brief Fee

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## APPENDIX

## THE CLAIMS ON APPEAL

1. An electric motor-operated vehicle comprised of a frame, a pair of wheels journaled by said frame, a pair of electric motors carried by said frame and each having an output shaft, and a pair of transmissions for selectively driving a respective of said wheels from the respective one of said electric motor output shafts or permitting said wheel to free wheel relative to said output shaft, each of said transmissions comprising a planetary gear mechanism, said planetary gear mechanism having a sun gear element, at least one planetary gear element meshing with said sun gear element, a ring gear element meshing with said planetary gear element and a carrier plate element supporting planetary gear element for rotation, said output shaft being in continuous driving relationship with one of said planetary gear mechanism elements, another of said planetary gear mechanism elements being in continuous driving relation with the respective one of said wheels, each of said transmissions comprising a coupling element for selectively retaining the associated ring gear element against rotation or permitting rotation thereof for selectively driving the associated wheel from said output shaft of the respective of said motors at a speed reduction ratio or permitting freewheeling of said wheel relative to said output shaft and an operation mechanism mounted on the vehicle frame, and a transmitting system for transmitting the action of the operation mechanism simultaneously to both coupling elements of said planetary gear mechanisms.

2. An electric motor-operated vehicle according to claim 5, wherein the wheel is driven by a transmission output shaft connected to the carrier plate element coaxially with the axis of said plate element, a wheel gear fixed to an inside cylindrical surface of said wheel driven by an output gear formed on the transmission output shaft, the motor output shaft and the transmission output shaft are disposed coaxially.

4. An electric motor-operated vehicle according to claim 1, wherein the output shaft drives the sun gear element.

5. An electric motor-operated vehicle according to claim 4, wherein the carrier plate element is in driving relation with the wheel.

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7. An electric motor-operated vehicle according to claim 1, wherein each wheel is journaled on a stationary part of the vehicle in which the respective ring gear is also journaled, each of said ring gears having at least one locking detent opening juxtaposed to said vehicle stationary part forming a part of the coupling element of the respective wheel, each of said coupling elements further including a respective locking pin reciprocally supported in said vehicle stationary part and adapted to engage said locking detent opening of the associated wheel for restraining said ring gear from rotation for effecting a driving relation between the respective electric motor output shaft and wheel, said locking pins being actuated by the operation mechanism through the transmitting system.

8. An electric motor-operated vehicle according to claim 7, wherein the operation mechanism actuates the locking pins through a respective one of a pair of wire transmitters.

9. An electric motor-operated vehicle according to claim 1, wherein each wheel is journaled on a stationary part of the vehicle in which the associated ring gear is also journaled, each of said ring gears having at least one locking detent opening juxtaposed to said vehicle stationary part forming a part of the respective of said coupling elements, said coupling elements further including a locking pin reciprocally supported in said vehicle stationary part and adapted to engage said locking detent opening for restraining said ring gear from rotation for effecting a driving relation between the electric motor output shaft and said wheel.